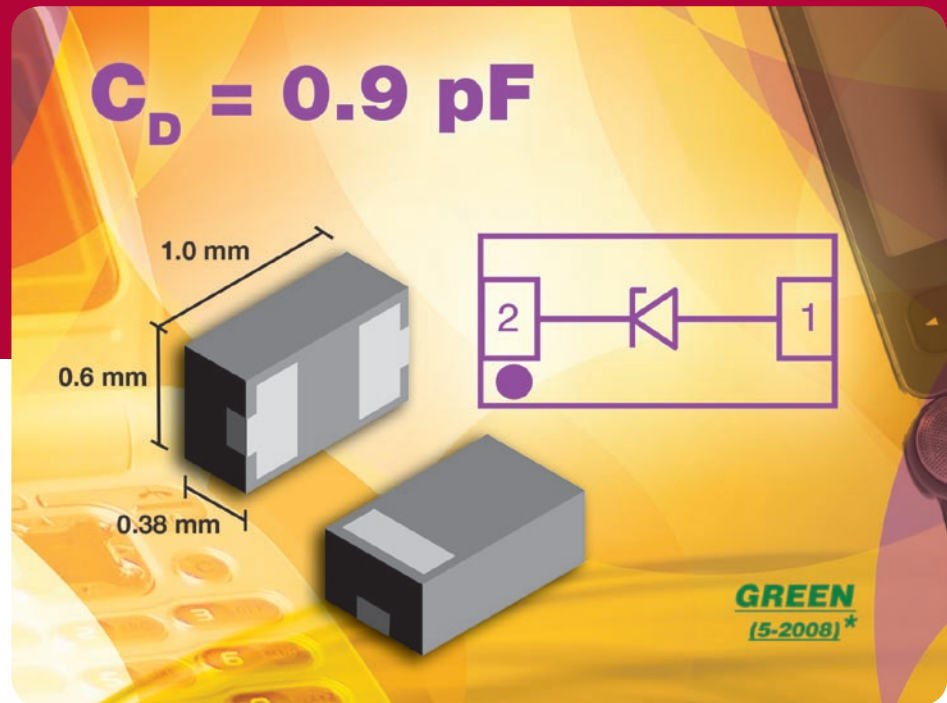




LOW-CAPACITANCE, SINGLE-LINE ESD PROTECTION DIODE

VBUS051BD-HD1



Low-Capacitance, Single-Line ESD Protection Diode in Ultra-Compact LLP1006-2L Leadless Package

KEY BENEFITS

- Ultra-compact LLP1006-2L leadless package
- Low package height of < 0.4 mm
- Low load capacitance of $C_D = 0.9$ pF
- Low leakage current of < 0.1 μ A
- ESD immunity > ± 15 kV
- High surge current according to IEC 61999-4-5, $I_{PP} > 3$ A
- RoHS-compliant
- Environmentally friendly “green” molding compound
- Pin plating NiPdAu (e4) for no whisker growth

APPLICATIONS

- Mobile phones
- MP3 players and other mobile consumer devices
- HDMI applications
- Mobile computing



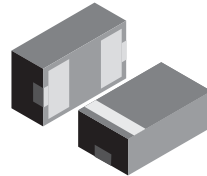
Low-Capacitance, Single-Line ESD Protection Diode

Features

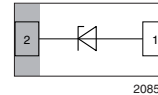
- Ultra compact LLP1006-2L package
- Low package height < 0.4 mm
- 1-line ESD-protection
- Low leakage current < 0.1 μ A
- Low load capacitance $C_D = 0.9$ pF
- ESD-protection to IEC 61000-4-2 ± 15 kV contact discharge ± 15 kV air discharge
- High surge current acc. IEC61000-4-5 $I_{PP} > 3$ A
- Soldering can be checked by standard vision inspection. No X-ray necessary
- Lead (Pb)-free component
- Pin plating NiPdAu (e4) no whisker growth
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



RoHS COMPLIANT GREEN (5-2008)*



20855



20856

Marking (example only)



Bar = Cathode marking
 X = Date code
 Y = Type code (see table below)

Ordering Information

Device name	Ordering code	Taped units per reel (8 mm tape on 7" reel)	Minimum order quantity
VBUS051BD-HD1	VBUS051BD-HD1-GS08	8000	8000

Package Data

Device name	Package name	Type code	Weight	Molding compound flammability rating	Moisture sensitivity level	Soldering conditions
VBUS051BD-HD1	LLP1006-2L	A	0.72 mg	UL 94 V-0	MSL level 1 (according J-STD-020)	260 °C/10 s at terminals

Absolute Maximum Ratings

Parameter	Test conditions	Symbol	Value	Unit
Peak pulse current	Acc. IEC 61000-4-5; $t_p = 8/20 \mu$ s; single shot	I_{PPM}	3	A
Peak pulse power	Acc. IEC 61000-4-5; $t_p = 8/20 \mu$ s; single shot	P_{PP}	45	W
ESD immunity	Contact discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 15	kV
	Air discharge acc. IEC 61000-4-2; 10 pulses	V_{ESD}	± 15	kV
Operating temperature	Junction temperature	T_J	- 40 to + 125	°C
Storage temperature		T_{STG}	- 40 to + 150	°C

Revision 02-Sep-08

* Please see document "Vishay Green and Halogen-Free Definitions (5-2008)" <http://www.vishay.com/doc?99902>

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